Abstract

FLEXIBLE ETHERNET BRIDGE

In one embodiment, an Ethernet bridge operates in either VLAN aware mode or VLAN unaware mode as specified by a user. The width of a CAM used for storing

5 address table can be minimized by using a mapping of VLAN identifiers to small numbers, which are stored in the CAM. Flooding can be minimized by employing various techniques. Communication can be quickly re-established even if the Ethernet address (or the machine having that address) moves to be reachable on different ports of the Ethernet bridge. Sufficiently quick response to bridge protocols may be ensured by using an

10 external processor to generate responses, and providing a higher priority DMA channel to transfer packets related to the bridge protocols.